

STATE OF ALASKA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF FORESTRY  
NORTHERN REGION

FAIRBANKS AREA

FOREST LAND USE PLAN

*Flag Flat*  
*NC-1203-F*

*ADL 416303*

**February 2010**

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## **I. INTRODUCTION**

### **A. Purpose**

The purpose of this Forest Land Use Plan (FLUP) is to provide sufficient information for reviewers to ensure that the best interest of the State will be served by the Department of Natural Resources, Division of Forestry, Fairbanks Area, offering this proposed timber sale. This FLUP deals with site specific considerations of the sale. The boundaries and precise volume of the sale may be refined if and when the sale is developed. Site specific research has been completed on title considerations, land classifications, applicable land management plans, appropriate silvicultural techniques, regulatory and statutory requirements, and physical conditions that apply to the proposed sale area. The proposal is for the harvest of approximately (+/- 30%) 42 acres of land that is predicted to yield approximately (+/- 30%) 60,000 CF of spruce. The sale design may be altered to mitigate potential conflicts. It will be the responsibility of the Forester-In-Charge to ensure that any purchaser of this sale harvests timber per the sale design and sale contract provisions and adheres to Alaska Forest Resources and Practices Act (AFRPA) best management practices.

The public is invited to comment on any aspect of this proposed timber sale with regards to the Preliminary Finding and Decision (AS 38.05.035). Comments should be mailed to the Division of Forestry, 3700 Airport Way, Fairbanks, Alaska 99709 or by email at [jeremy.douse@alaska.gov](mailto:jeremy.douse@alaska.gov). Comments must be received at the Division of Forestry no later than March 8<sup>th</sup> 2010 in order to be considered in the Final Decision of whether the sale will be held in whole or in part. To be eligible to appeal the final decision, a person must have provided written comment by March 8<sup>th</sup> 2010.

### **B. Five-Year Sale Schedule**

The general area and timber type that this proposed sale occupies has been shown as a potential sale area in the current Five-Year Schedule of Timber Sales (FYSTS) for Fiscal Years 2010-2014 as required by AS 38.05.113. It has been listed in previous schedules.

### **C. Location**

The proposed sale is located roughly 37 miles southeast of Fairbanks within the Fairbanks North Star Borough and within the boundaries of the Doyon Region. Coastal Zone Management considerations do not apply. The proposed sale area is located within Sections 29 and 32 Township 5 South Range 4 East, Fairbanks Meridian. The sale area is shown on the attached map and is within the United States Geological Survey 1:63,360 Quadrangle map titled Fairbanks B-1 and Big Delta B-6. The tract is accessed from Fairbanks by driving southeast on the Richardson Highway to milepost 319. Turn right (west) on the old Valdez Trail. This road traverses a residential area and turns to the north. Travel along this road until it ends at the Tanana River. This is where a new winter road will be started to gain access to the sale. The sale is located 2.3 miles north along the proposed winter road.

### **D. Title, Classification and Other Active or Pending Interests**

The acquisition for the land upon which the sale is proposed is based on General Selection 545. The title was transferred by Patent 50-75-0098. There are no title restrictions on the area. The primary land classification for the area is Forestry per Classification Order NC-82-065. The proposed sale area is within Unit 7A of the Tanana Valley State Forest (TVSF).

#### **E. General Timber Sale Program Objectives**

1. **Develop the State's Renewable Resources.** To follow the DNR's constitutional mandate to encourage the development of the State's renewable resources, making them available for maximum use consistent with the public interest. Sustain and promote a healthy, long-term timber industry in the State, through providing a secure source of timber for harvest that produces raw materials for local manufacturing plants when practical while protecting other resources such as fish and wildlife.
2. **Improve the State's Economy.** To help the State's economy by providing royalties to the State in the form of stumpage receipts, as well as contributions to local economies through wages, purchases, jobs and business.
3. **Improve Forest Health.** To improve forest growth and vigor by harvesting and replacing mature stands and stands with declining vigor with new healthy regenerating stands, while protecting and maintaining other resource values. The actions authorized under this decision will follow the constitutional mandate of sustained yield and shall adhere to multiple use management as described in the TVSF Management Plan.
4. **Improve Wildlife Habitat.** Meet the statutory wildlife management objective for the TVSF (AS 41.17.400(e)) that provides for the production of wildlife for a high level of sustained yield human use through habitat improvement techniques, while allowing for timber management and other beneficial uses of public land and resources.

#### **II. LEGAL AUTHORITY**

This Division of Forestry is taking this action under the authority of AS 38.05.035 (e) (Best Interest Finding); AS 38.05.110-120 (Alaska Land Act Statutes); 11 AAC 71 (Timber Sale Statutes and Regulations); AS 41.17.010-.950 and 11 AAC 95 (Forest Resources and Practices Statutes and Regulations).

#### **III. ADMINISTRATIVE RECORD**

The case file ADL 416303 and the Tanana Valley State Forest Management Plan constitute the administrative record for this finding.

#### **IV. DISCUSSION OF ISSUES**

##### **A. Physical Characteristic of the Sale Area**

1. **Topography.** The site is on a flat island within the floodplain of the Tanana River. Elevation is at 640 feet. The terrain is generally flat with small undulations and some old drainage channels. General slope angle across the sale is 0 percent.
2. **Soils.** Soils in this sale area are classified as an Eielson-Piledriver, occasionally flooded, complex. These are somewhat poorly drained lowland loam soils that have formed from alluvium. These soils have no restrictive layer within the first 72 inches of the soil profile and are found in floodplains.
3. **Water bodies.** This sale is on an island within the Tanana River flood plain. There are old drainage channels on the island but not within the boundary of the sale. A 100' buffer will be maintained between the edge of the unit and any channels associated with the Tanana. The sale area presents no obstacles that would prevent implementation of the best management practices of the AFRPA to maintain water quality.

4. **Stand Conditions.** The timber stand and proposed harvest unit consists of 120 year old white spruce. There is evidence of butt rot with some wind throw particularly around openings. The pole timber is stagnant and the same age as the sawtimber because of a thick moss layer keeping the soils cold. Understory vegetation includes horsetail, rose and some alder. The moss depth averages 6 inches. The grass component is light in this stand and is estimated to cover 5% of the area. This unit has approximately 127 spruce trees per acre and a basal area of approximately 73 square feet/acre.

**B. Historic and Current Land Use**

The historic uses of land in the general area have been logging, hunting, trapping, and general trail use. The current uses of the area are recreation, wood cutting, hunting and trapping.

**C. Wildlife Habitat**

Wildlife typical of the interior are found here and during ground reconnaissance moose, fox, hare, grouse and squirrel sign were observed. There are no known raptor nests within the proposed sale area. No critical wildlife habitat has been identified for this area (TVSF Management Plan), nor has any become apparent during ground reconnaissance.

Treatments proposed for this stand are projected to enhance habitat conditions for ruffed grouse, moose, voles, hares, and ultimately, lynx, marten and fox. In the past, Alaska Department of Fish and Game, Division of Wildlife Conservation have recommended managing for as much diversity as possible when prescribing harvest unit size, shape and position to mimic the results of wildfire or other stand replacement phases such as insect outbreaks or flood events. To accomplish these objectives snags will be retained to provide late-successional wildlife habitat for hole nesting birds, woodpeckers, small mammals, and other species requiring perching habitat. The unit will be laid out with an uneven edge, along and between timber types. This will create varied edge effect beneficial to many wildlife species.

**D. Fisheries and Water Quality**

Best management practices will be implemented to ensure water quality standards in all water courses. During review of the FY 2010-2014 FYSTS, the ADF&G, Division of Habitat mentioned that the sale is in a relatively unstable portion of the Tanana river floodplain when bank erosion is active. This will be mitigated by maintaining 100' buffers from the channel itself, leaving residual trees for soil stabilization and only allowing harvest when the ground is frozen to minimize ground disturbance. There is no expectation that this harvest will have negative impacts on the main branch of the Tanana River.

Approximately 2.4 miles of new winter road construction will be required for this sale. An ice bridge will also be required to gain access to the island. A fish habitat permit will need to be acquired from ADF&G to account for the ice bridge. Construction and maintenance of this road set to the BMP standards outlined in the

AFRPA will be required. Erosion within the unit will be mitigated by backfilling skid trails with debris and through the installation of water bars if necessary.

**E. Subsistence**

The tract has not been designated as a subsistence zone. The proposed sale of timber is anticipated to have no deleterious effects on subsistence activities. Subsistence activities of fishing, trapping, hunting and gathering of berries and other non timber forest products may occur on State owned lands.

**F. Recreation and Tourism**

Recreation use of this area is moderate, but not inconsistent with a timber sale. Primarily it consists of hunting, trapping, and general trail use. Sufficient snow cover will be left on the roads to enable continued winter recreational use. Cross trails will be kept free of either snow filled or brush filled berms.

**G. Scenic Resources**

The sale is located in the Tanana River drainage. It will not be visible from the any major roads but it may be visible by private landowners within the Flag Hill area which is located to the south and east above the sale. Leave trees and residuals will somewhat obscure the harvest area and help blend the cut border with existing landscape.

**H. Cultural Resources**

The TVSF Management Plan does not list any historic cultural or archaeological sites in the vicinity of the proposed harvest. The State Office of History and Archaeology (OHA) do not list any sites on its inventory and had no comment during its review of the FY 2010-2014 FYSTS. During the course of activities associated with this timber sale, cultural and/or paleontological resources may be inadvertently discovered. Should such discovery occur, these sites shall be protected from further disturbance and OHA contacted immediately so that compliance with state laws governing cultural resources may begin.

Under the Alaska Historic Preservation Act (AS 41.35), all burials on state land are protected. If burials or human remains are found, all land altering activities that would disturb the burial or remains shall cease and measures taken to protect it in place. OHA and a law enforcement officer will be notified immediately to ensure that proper procedures for dealing with human remains are followed.

**I. Sustained Yield and Allowable Cut**

The Alaska Forest Resources and Practices Act (AS 41.17.060 (c)) and Article VIII Sec. 4 of the State Constitution require that the State forest land be managed on a sustained yield basis. Sustained yield is defined in the Alaska Forest Resources and Practices Act (AS 41.17.950(25)):

“Sustained Yield” means the achievement and maintenance in perpetuity of a high level annual or regular periodic output of the various renewable resources of forest land and water without significant impairment of the productivity of the land and water, but does not require that timber be harvested in a non-declining yield basis over a rotation period.

The Annual Allowable Cut (AAC) is the amount that can be harvested from forest land managed for forestry purposes in a year under sustained yield management. The AAC in the Fairbanks Area is based on a ten-year average as determined by the Parsons and Associates, Inc. report titled "Tanana State Forestry Lands Periodic Sustained Yield Analysis". This sale complies with sustained yield/allowable cut principles outlined in the Fairbanks Area Five-Year Schedule of Timber Sales for FY 2010-2014. The AAC for the Fairbanks Management Area is approximately 6,260 acres. The AAC will not be exceeded for this proposed sale.

**J. Silvicultural Prescription**

1. **Stand Silvics.** The normally merchantable species of trees here are white spruce and birch. Data and research on regeneration and growth characteristics of these species are compiled within the Resource Analysis of the Tanana Valley State Forest (TVSF) Management Plan. The harvest and reforestations systems available in Interior Alaska are also reviewed and listed in the Resource Analysis. The results of the public and agency discussions for harvest and reforestation are discussed in the TVSF Management Plan. Silvicultural harvest systems that facilitate even-aged (natural) management are generally preferred. They mimic the ecological impact of wildfire and other disturbances and result in the greatest increase in site productivity. Even-aged management is normally accomplished through clear cuts, patch cuts and heavy partial cuts (such as seed tree or shelterwood systems), which opens up the site to maximum solar gain. This results in the greatest production of young spruce understory valuable years later as timber. Even-aged management techniques are utilized to provide young, vigorously growing stands in juxtaposition to older, undisturbed stands. Such placement of harvest units can optimize natural seedling and the edge effect. The proposed sale is a heavy partial cut harvest that will open the forest allowing for hand planting of spruce.
2. **Specific Management Objectives.** Utilize the current commercial value of this timber stand before the spruce budworm and stem rot inflicts further damage, and then return this site to a productive mixed forest at an equal or greater basal area than currently exists. Opening the canopy will warm soils and reduce moss depth thus creating a more productive site. Spruce dominates the site accounting for over 90% of the standing timber. It is expected that the spruce component will maintain itself as the dominant component with natural regeneration and release of residual stems. The objective is to remove mature spruce to recover the economic value of the timber before it further degrades. It is reasonable to assume that these objectives will be realized under the recommended prescription and planting of white spruce.
3. **Harvest Methods.** The sale will be harvested by a clear-cut with reserves silvicultural system. All spruce 6" DBH or larger will be removed. Snags, birch and white spruce smaller than 6" will not be cut. Residual trees will be protected from damage during harvest operations. Harvesting will be by the whole tree yarding system. Slash disposal at the landings will be by burning or by salvage for fuelwood use.
4. **Regeneration.** Regeneration of white spruce occurs only from seeds. White spruce trees generally produce some level of seed crop every three to five years and large seed crops every five to seven years. Budworm is moderate in this area and cone

production has been minimal. When the budworm infestation subsides, white spruce is expected to provide seed. Adjacent spruce and birch stands will likely provide some seed into the unit. The unit will be hand planted soon after logging operations are complete. A regeneration survey will be conducted three years after the harvest. If the survey indicates inadequately stocked areas greater than ½ acre and totaling 4.2 acres then additional hand plating of white spruce seedlings will be performed on non-stocked areas. The goal for regeneration is to achieve a minimum of 450 evenly distributed trees per acre.

**K. Transportation**

The planned access to the proposed sale is by existing secondary roads located west of the Richardson Highway and a proposed winter road. The first 2.7 miles are along the Old Valdez Trail which leads to a three way intersection. Once at the intersection turn left (West) which leads to the Main Channel of the Tanana River. The ice bridge is needed to cross a slough that feeds into the Tanana River. After crossing the slough 2.4 miles of new winter road will be constructed to the timber sale. The 2.7 miles of existing secondary road will be maintained to the standards set out in the AFRPA. The 2.4 miles of new winter road will be constructed and maintained to the standards set out in the AFRPA.

**L. Erosion**

There are two soil erosion concerns: surface erosion and mass wasting of soil and debris. Road construction and poor maintenance of roads primarily causes surface erosion. To avoid erosion, debris will be placed back onto skid trails and water bars installed if necessary. Harvesting will be suspended during periods of thawing soil conditions to assure there is minimal soil disturbance. The location of skid trails will optimize skidding distances and provide for adequate landing areas. The other aspect of erosion (mass wasting and debris avalanches) normally occurs on slopes of more than 70 percent. In the area of the proposed timber sale slopes do not reach this grade.

**M. Mining**

This sub-unit of the TVSF has moderate mineral potential however; there are no mining claims within the sale area. More detailed information on subsurface resource use is found in the TVSF Management Plan. This sale will have no impact on the potential mining resources or mining activity in this area.

**N. Materials**

No rock materials will be required for the construction of access roads.

**O. Economics**

In addition to generating royalties to the State's general fund, the proposed sale will create economic benefits to the Fairbanks North Star Borough and to other locations in Alaska. The Borough business community will receive direct economic benefits from providing support services for the operators through sales of fuel, food, housing, medical and miscellaneous supplies. The residents of the Borough will receive an indirect benefit through taxes paid to cities and the Borough by the operator and employees during the course of the timber harvest operation.



The sale is expected to benefit the local economy by providing jobs. It will have a positive impact on local employment by generating numerous man-hours of work associated with the harvest and transportation of wood products from this sale. Additionally the public may benefit from access to additional personal use fuel wood areas.

## **V. MARKET CONDITIONS**

Renewable heating fuels such as firewood are in high demand in interior Alaska to offset fluctuating oil prices. A market for biomass fuels for the creation of pellets and chips is also starting to emerge in the Fairbanks area. Fine particulate matter that leads to poor air quality is a concern for local regulatory agencies but wood energy is still seen as a critical component for local residents as new technologies emerge for more efficient wood and pellet stoves. Local logging operations are experiencing high demand for firewood and are in need of a reliable supply of timber to meet this demand. This sale is expected to contain timber well suited for lumber and fuel wood production.

The spruce sawtimber component of this sale will provide materials to local processors for construction materials, dunnage, and other wood products. While the housing market has slowed throughout the nation, it is believed that this market will rebound. The population in the Fairbanks area continues to rise and housing demands will continue to exist.

The job market is still in poor condition and timber sales such as this create jobs in the forest products industry. Operators, drivers, mechanics and processors are needed to deliver firewood and wood products to local residents and industry.

## **VI. ALTERNATIVE ACTIONS**

There are four possible alternatives to consider for this sale. A discussion of each of the four alternatives follows:

### **1. To continue the sale(s) as proposed.**

This alternative meets the objectives of the Five-Year Schedule of Timber Sales and DNR'S constitutional mandate. It also meets the silvicultural objective of improving forest vigor, provides for a value-added end product and creates additional jobs in Alaska due to the combination of road building, logging, and trucking. This alternative also complies with the management objectives of the TVSF Management Plan for Unit 6.

### **2. To modify the sale(s) by making them smaller or larger.**

The proposed sale unit is a logical setting for typical commercial logging equipment in Interior Alaska. The size of the sale is designed to be large enough to be economically viable considering access development and mobilization costs and distance to processing facilities. Sales of this size are appropriately balanced to maintain other resource values as well as provide economic benefits to the Tanana Valley.

### **3. Defer the sale of this timber to a later date.**

Deferring harvest to a later date would fail to meet many of the objectives of the sale program. One of the main objectives is to make State-owned timber consistently available to the timber industry.

4. **Do not offer this timber for sale.**

This alternative would result in not meeting any of the objectives outlined for this management action. Utilization of the forest resource would not be achieved. There would be no significant contribution to the State and local economies. This alternative would delay the management objectives planned for the area, deny making a source of raw materials available to the local wood products industry, and would delay the harvest of mature trees, prior to the onset of disease or insect infestation. Decay in infected and infested mature spruce saw timber results in the loss of economic value.

**VII. PRELIMINARY FINDING AND DECISION**

The purpose of this decision is to determine if the Department of Natural Resources, Division of Forestry, will make available timber located in Sections 29 and 32, Township 5 South, Range 4 east, Fairbanks Meridian. After due consideration of all pertinent information and alternatives, the DNR has reached the following **Preliminary Decision: To offer the sale as proposed in Alternative 1.** In addition, the DNR finds that this preliminary decision satisfies the objectives as stated in this document and it is in the best interest of the State to proceed with this action.



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Jeremy Douse CF  
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2/3/2010  
(Date)